Amendments to the Claims

This listing of claims will replace all prior versions of claims in the application.

Listing of Claims

What is claimed is:

1. (Currently Amended) A method for generating a secreted soluble trimeric fusion protein, comprising:
(a) creating a DNA construct comprising a transcriptional promoter linked to a template encoding a signal peptide sequence followed by in-frame fusion to a non-collagenous polypeptide to be trimerized, which in turn is joined in-frame to a mammalian polypeptide capable of self-trimerization which is heterologous from the ~~first~~ non-collagenous polypeptide to be trimerized; (b) introducing said DNA construct into a eukaryotic cell; (c) growing said host cell in an appropriate growth medium under physiological conditions to allow the secretion of a ~~trimerized~~ trimeric fusion-protein encoded by said DNA sequence; (d) isolating said ~~trimerized~~ trimeric fusion protein from the culture medium of said host cell.

2. (Currently Amended) The method of claim 1 wherein the ~~trimerized polypeptide~~ trimeric fusion protein is a homotrimer.

3. (Currently Amended) The method of claim 1 wherein the mammalian polypeptide capable of self-trimerization ~~trmerizing polypeptide~~ comprises the C terminal portion of collagen capable of self-assembly into a trimer selected from the group consisting of pro.alpha.1(I), pro.alpha 2(I), pro.alpha.1(II),

pro.alpha.1(III), pro.alpha.1(V), pro.alpha.2(V), pro.alpha.1(XI), pro.alpha.2(XI) and pro.alpha.3(XI).

4. (Canceled)

5. (Canceled)

6. (Currently Amended) The method of any one of claims 1-3 ~~methods of claims 1-5~~, wherein the signal peptide sequence and the ~~non-collagen~~ non-collagenous polypeptide to be trimerized are both from the same native secreted protein.

7. (Currently Amended) The method of any one of claims 1-3 ~~methods of claims 1-5~~, wherein the signal peptide sequence and the non-collagenous polypeptide ~~protein~~ to be trimerized are selected from two different secreted proteins.

8. (Currently Amended) The method of claim 1 ~~methods of claim1, 4 and 5~~, wherein the host eukaryotic cell is a fungal or insect cell.

9. (Currently Amended) The method of claim 1 ~~methods of claim1, 4 and 5~~, wherein the host eukaryotic cell is a cultured mammalian cell line.

10. (Currently Amended) The method of claim 3 ~~methods of claims 1-5~~, wherein the ~~a~~ C-terminal portion of collagen includes a "glycine-repeat" triple helical region of collagen linked to a C-propeptide.

11. (Currently Amended) The method of claim 3 ~~methods of claim 10~~, wherein ~~a~~ the C-terminal portion of collagen is identified by SEQ ID NOS: ~~Sequence ID Nos.~~ 1-2.

12. (Currently Amended) The method of claim 3 ~~methods of claims 1-5~~, wherein the trimerizing C-terminal portion of collagen comprises only a C-propeptide without any glycine-repeat triple helical region of collagen.

13. (Currently Amended) The method of any one of claims 10-12 ~~methods of claims 10-12~~, wherein the trimerizing C-terminal portion of collagen comprises a mutated or deleted BMP-1 protease recognition sequence, thereby conferring the trimeric fusion proteins resistance to ~~said~~ BMP-1 protease degradation.

14. (Currently Amended) The method of claim 12 or 13 ~~methods of claims 12-13~~, wherein the trimerizing C-terminal portion of collagen is identified by SEQ ID NOS: ~~sequence ID Nos.~~ 3-4.

15-19. (Canceled)